

PALOUSE RIVER BASIN

13351000 PALOUSE RIVER AT HOOPER, WA--Continued  
(National Water-Quality Assessment station)

WATER-QUALITY RECORDS

PERIOD OF RECORD.--Water years 1959-71, 1993-current year.

PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: October 1961 to September 1971, August 1993 to September 1994.

WATER TEMPERATURE: October 1961 to September 1971, August 1993 to current year.

SUSPENDED SEDIMENT DISCHARGE: October 1961 to September 1971, October 1992 to September 1999; November 2000 to March 2001 (discontinued).

INSTRUMENTATION.--Water-quality monitor since August 1993. Electronic data logger with sixty-minute recording interval except for period Nov. 15, 1994 to Oct. 20, 1995, when the recording interval was seventy-two minutes.

REMARKS.--Temperature record excellent except Aug. 29 to Sept. 10, which is good. In October 1996, station became a Central Columbia Plateau National Water-Quality Assessment Program (NAWQA) surface-water quality trend site.

EXTREMES FOR PERIOD OF DAILY RECORD.--

SPECIFIC CONDUCTANCE: Maximum recorded, 447 microsiemens Aug. 14, 1994, but may have been higher during periods of missing record; minimum recorded, 140 microsiemens Mar. 10, 1994, but may have been lower during periods of missing record.

WATER TEMPERATURE: Maximum recorded 32.5°C (rounded) July 24, 1994, but may have been higher during periods of missing record; minimum recorded, 0.0°C for several days during winter months.

SEDIMENT CONCENTRATION: Maximum daily mean, 10,100 mg/L Feb. 8, 1996; minimum daily mean, 1 mg/L Jan. 4, 2001.

SEDIMENT DISCHARGE: Maximum daily, 527,000 tons Feb. 9, 1996; minimum daily, 0.04 tons Aug. 16, 20, 1994.

EXTREMES FOR CURRENT YEAR.--

WATER TEMPERATURE: Maximum 28.9°C July 4, but may have been higher during period of missing record; minimum, 0.0°C Nov. 16, Dec. 11-20.

SEDIMENT CONCENTRATION: Maximum daily mean, 195 mg/L Feb. 7; minimum daily mean, 1 mg/L Jan. 4.

SEDIMENT DISCHARGE: Maximum daily, 392 tons Feb. 7; minimum daily, 0.38 tons Dec. 12.

TEMPERATURE, WATER (DEG. C), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	OCTOBER			NOVEMBER			DECEMBER			JANUARY		
	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN	MAX	MIN	MEAN
1	17.2	15.0	16.0	8.0	6.3	7.1	2.3	1.5	1.9	2.4	2.1	2.2
2	15.8	13.6	14.6	7.1	5.6	6.3	2.9	2.1	2.5	2.4	1.8	2.2
3	15.0	12.5	13.7	7.0	5.2	6.0	3.1	2.7	2.9	1.9	1.6	1.8
4	13.9	11.1	12.5	6.7	5.4	6.0	3.1	2.9	3.0	2.6	1.8	2.1
5	13.3	10.4	11.7	7.1	5.4	6.2	2.9	2.7	2.8	4.2	2.4	3.1
6	12.5	9.9	11.1	6.8	5.2	6.0	2.7	2.3	2.6	3.7	1.8	3.0
7	12.5	9.6	10.9	6.3	4.8	5.5	2.4	2.1	2.2	1.8	1.1	1.4
8	13.0	9.9	11.3	5.7	4.8	5.2	2.1	1.8	1.9	1.5	.8	1.2
9	11.9	10.5	11.2	5.1	3.8	4.7	2.1	1.5	1.7	1.8	.5	1.1
10	11.8	10.5	11.1	3.8	2.3	3.2	1.8	.8	1.5	2.1	1.3	1.7
11	12.5	10.8	11.6	2.4	1.1	1.8	.8	.0	.3	1.9	1.5	1.7
12	12.1	10.8	11.4	1.8	1.3	1.6	.2	.0	.1	2.1	1.5	1.8
13	13.3	11.0	12.0	2.3	.8	1.5	.2	.0	.1	2.6	1.9	2.3
14	13.2	11.6	12.2	2.1	.8	1.3	.2	.0	.1	2.7	2.1	2.3
15	12.5	9.9	11.2	1.6	.3	.9	.3	.0	.1	2.3	1.3	1.7
16	12.2	10.5	11.3	1.0	.0	.5	.2	.0	.1	1.3	.8	1.1
17	13.3	10.5	11.7	1.3	.5	.9	.5	.0	.2	1.1	.8	1.0
18	13.0	11.3	12.1	1.9	.8	1.2	.3	.0	.1	1.3	.5	.9
19	13.3	11.0	12.1	1.5	.3	.9	.5	.0	.2	1.5	.7	1.2
20	12.2	11.8	12.1	1.1	.2	.6	.3	.0	.2	1.9	.8	1.3
21	11.8	10.4	11.1	.7	.3	.5	.7	.2	.3	2.1	1.1	1.5
22	10.7	8.5	9.6	.8	.7	.8	.8	.3	.6	2.9	1.6	2.2
23	9.7	7.7	8.6	.8	.8	.8	1.5	.7	1.1	3.7	2.4	2.9
24	9.3	7.0	8.0	1.3	.8	1.0	1.8	1.1	1.4	3.1	2.3	2.6
25	9.3	7.0	8.0	1.8	1.1	1.5	1.1	.5	.8	3.1	1.8	2.3
26	8.8	7.9	8.3	2.7	1.6	2.2	1.1	.5	.8	3.2	1.9	2.4
27	10.2	8.4	9.1	3.5	2.4	2.9	1.6	.8	1.2	2.4	2.1	2.2
28	9.7	9.1	9.4	3.1	1.8	2.3	1.8	1.1	1.5	2.1	1.5	1.8
29	9.9	8.4	9.0	2.4	1.8	2.1	1.8	1.5	1.6	2.4	1.1	1.7
30	9.3	7.4	8.2	2.6	1.5	1.9	1.9	1.3	1.7	2.4	1.3	1.8
31	8.5	7.3	7.7	---	---	---	2.3	1.8	2.0	3.8	1.9	2.8
MONTH	17.2	7.0	10.9	8.0	.0	2.8	3.1	.0	1.2	4.2	.5	1.9



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SEDIMENT DISCHARGE, SUSPENDED (TONS/DAY), WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
	OCTOBER			NOVEMBER			DECEMBER		
1	81	---	---	116	6	1.8	148	2	.89
2	81	---	---	113	6	1.8	153	2	.88
3	89	---	---	112	6	1.8	150	2	.82
4	101	---	---	112	6	1.7	150	2	.77
5	101	---	---	112	6	1.7	150	2	.73
6	114	---	---	116	5	1.7	139	2	.67
7	108	---	---	131	5	1.8	140	2	.68
8	99	---	---	135	5	1.8	135	2	.65
9	94	---	---	140	5	2.0	135	2	.65
10	90	---	---	146	6	2.2	133	2	.64
11	90	---	---	136	6	2.1	118	2	.56
12	90	---	---	133	6	2.1	80	2	.38
13	90	---	---	128	5	1.8	108	2	.51
14	90	---	---	118	5	1.5	103	2	.49
15	90	---	---	104	4	1.2	116	2	.56
16	91	---	---	109	4	1.1	123	2	.69
17	90	---	---	122	4	1.2	141	2	.93
18	94	---	---	120	4	1.2	139	3	1.0
19	101	---	---	108	4	1.0	143	3	1.2
20	95	---	---	102	3	.94	141	4	1.3
21	106	---	---	106	3	.94	141	4	1.5
22	106	---	---	109	3	.94	142	5	1.8
23	110	---	---	113	3	.94	151	8	3.4
24	116	---	---	111	3	.90	205	29	17
25	119	---	---	111	3	.86	228	31	19
26	127	---	---	114	3	.85	216	37	21
27	120	---	---	117	3	.84	209	32	18
28	112	---	---	118	3	.82	204	21	11
29	111	---	---	130	2	.86	193	13	6.6
30	110	---	---	146	2	.92	197	12	6.3
31	114	---	---	---	---	---	190	13	6.7
TOTAL	3130	---	0	3588	---	41.31	4721	---	127.30

DAY	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)	MEAN DISCHARGE (CFS)	MEAN CONCENTRATION (MG/L)	SEDIMENT DISCHARGE (TONS/DAY)
	JANUARY			FEBRUARY			MARCH		
1	186	13	6.4	223	23	14	435	25	30
2	181	10	4.9	225	35	21	420	27	31
3	172	5	2.1	309	48	40	426	29	34
4	177	1	.41	318	84	73	474	32	40
5	184	2	1.3	454	113	139	470	36	46
6	282	105	84	656	177	320	463	37	46
7	236	105	67	738	195	392	575	---	---
8	252	107	73	561	110	169	700	---	---
9	253	59	40	476	82	106	763	---	---
10	247	22	14	451	64	78	831	---	---
11	226	21	13	419	48	54	819	---	---
12	220	23	14	381	40	41	745	---	---
13	221	17	10	345	32	30	699	---	---
14	233	15	9.3	329	25	22	688	---	---
15	225	13	7.9	318	16	14	845	---	---
16	213	11	6.3	310	8	6.9	781	---	---
17	198	10	5.3	310	8	6.7	664	---	---
18	177	13	6.3	300	8	6.4	646	---	---
19	202	13	7.0	304	10	8.6	580	---	---
20	211	7	4.0	322	17	15	739	---	---
21	204	4	2.4	361	25	24	1380	---	---
22	211	6	3.6	388	28	30	950	---	---
23	215	8	4.4	434	26	30	761	---	---
24	223	8	5.1	565	30	46	669	---	---
25	235	7	4.3	587	35	55	632	---	---
26	244	8	5.2	548	32	47	664	---	---
27	238	8	5.2	505	30	40	817	---	---
28	234	6	3.6	466	29	37	817	---	---
29	230	5	3.1	---	---	---	739	---	---
30	221	7	4.0	---	---	---	766	---	---
31	218	10	6.1	---	---	---	720	---	---
TOTAL	6769	---	423.21	11603	---	1865.6	21678	---	227
YEAR	95580	---	2684.42						

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	TIME	DIS-CHARGE, INST. CUBIC FEET PER SECOND (00061)	BARO-METRIC PRES-SURE (MM OF HG) (00025)	OXYGEN, DIS-SOLVED (MG/L) (00300)	OXYGEN, DIS-SOLVED (PER-CENT SATURATION) (00301)	PH WATER WHOLE FIELD (STANDARD UNITS) (00400)	SPE-CIFIC CON-DUCTANCE (US/CM) (00095)	TEMPER-ATURE WATER (DEG C) (00010)	HARD-NESS TOTAL (MG/L AS CaCO3) (00900)	CALCIUM DIS-SOLVED (MG/L AS Ca) (00915)	MAGNE-SIUM, DIS-SOLVED (MG/L AS Mg) (00925)	POTAS-SIUM, DIS-SOLVED (MG/L AS K) (00935)	SODIUM AD-SORP-TION RATIO (00931)	
OCT														
05...	1230	99	741	11.9	113	8.8	363	11.6	130	32.0	12.6	4.74	1.0	
NOV														
02...	1230	112	740	13.1	110	9.0	381	6.6	130	32.9	12.8	4.63	1	
DEC														
05...	1130	150	749	13.5	103	8.6	364	3.3	130	32.5	11.3	3.82	.9	
JAN														
03...	1110	160	745	13.9	102	8.5	353	1.7	120	30.3	11.6	4.19	.9	
FEB														
06...	1030	660	735	11.3	88	8.3	316	3.4	110	28.5	9.47	4.50	.8	
MAR														
06...	1400	461	739	11.4	100	8.4	324	8.4	110	28.9	9.68	3.80	.8	
APR														
02...	1040	683	726	10.8	95	8.1	202	7.6	70	18.2	5.92	2.49	.6	
MAY														
02...	1010	2150	744	9.9	88	8.1	171	9.2	59	15.3	4.99	2.84	.6	
JUN														
04...	1220	178	728	11.8	124	8.9	302	15.6	110	28.8	10.4	3.81	.8	
JUL														
10...	1110	69	731	10.0	126	9.1	331	24.7	120	29.4	11.8	4.08	1.0	
AUG														
06...	1120	29	737	9.1		8.7	--	23.4	130	30.9	13.0	4.63	1	
SEP														
04...	1210	31	732	9.2	106	8.5	373	20.0	130	29.4	13.6	4.64	1	
DATE		SODIUM, DIS-SOLVED (MG/L AS Na) (00930)	SODIUM PERCENT (00932)	ALKA-LINITY WAT DIS TOT IT FIELD (MG/L AS CaCO3) (39086)	BICAR-BONATE WATER DIS IT FIELD (MG/L AS HCO3) (00453)	CAR-BONATE WATER DIS IT FIELD (MG/L AS CO3) (00452)	CHLO-RIDE, DIS-SOLVED (MG/L AS CL) (00940)	FLUO-RIDE, DIS-SOLVED (MG/L AS F) (00950)	SILICA, DIS-SOLVED (MG/L AS SiO2) (00955)	SULFATE DIS-SOLVED (MG/L AS SO4) (00945)	SOLIDS, DIS-SOLVED (TONS PER AC-FT) (70303)	SOLIDS, DIS-SOLVED (TONS PER DAY) (70302)	SOLIDS, RESIDUE AT 180 DEG. C DIS-SOLVED (MG/L) (70300)	SOLIDS, SUM OF CONSTI-TUENTS, DIS-SOLVED (MG/L) (70301)
OCT														
05...	26.4	29	157	172	10	11.2	.3	15.7	14.5	.30	58.5	219	216	
NOV														
02...	27.5	30	154	169	10	13.0	.3	16.3	14.5	.30	66.5	220	225	
DEC														
05...	23.1	28	146	172	3	10.4	.3	19.1	13.9	.29	86.3	213	214	
JAN														
03...	22.4	27	136	161	2	12.0	.3	24.6	14.0	.30	95.5	221	213	
FEB														
06...	19.6	27	122	149	.0	8.9	.2	17.7	12.6	.28	365	205	188	
MAR														
06...	19.4	27	115	140	.0	7.0	.3	23.9	14.9	.27	250	201	198	
APR														
02...	12.1	27	75	92	.0	4.2	E.2	23.0	8.8	.18	251	136	128	
MAY														
02...	10.7	27	62	76	.0	4.6	E.1	22.9	7.3	.19	813	140	113	
JUN														
04...	19.2	26	131	140	10	6.2	.2	14.5	11.6	.24	84.1	175	177	
JUL														
10...	25.3	30	144	133	21	9.7	.3	16.6	12.8	.28	38.8	208	196	
AUG														
06...	26.5	30	159	173	10	9.9	.3	19.9	14.8	.29	16.9	216	216	
SEP														
04...	27.3	31	173	206	3	10.5	.3	19.6	16.7	.31	19.0	227	226	

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WATER-QUALITY DATA, WATER YEAR OCTOBER 2000 TO SEPTEMBER 2001

DATE	NITRO- GEN, AMMONIA DIS- SOLVED (MG/L AS N) (00608)	NITRO- GEN,AM- MONIA + ORGANIC DIS. (MG/L AS N) (00623)	NITRO- GEN,AM- MONIA + ORGANIC TOTAL (MG/L AS N) (00625)	NITRO- GEN, NO2+NO3 DIS- SOLVED (MG/L AS N) (00631)	NITRO- GEN, NITRITE DIS- SOLVED (MG/L AS N) (00613)	NITRO- GEN, TOTAL (MG/L AS N) (00600)	PHOS- PHORUS DIS- SOLVED (MG/L AS P) (00666)	PHOS- PHORUS ORTHO, DIS- SOLVED (MG/L AS P) (00671)	PHOS- PHORUS TOTAL (MG/L AS P) (00665)	IRON, DIS- SOLVED (UG/L AS FE) (01046)	MANGA- NESE, DIS- SOLVED (UG/L AS MN) (01056)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (MG/L) (80154)	SEDI- MENT, DIS- CHARGE, SUS- PENDEDED (T/DAY) (80155)
OCT													
05...	<.041	.31	.42	.818	.008	1.2	.031	.020	.061	20	6.7	5	1.3
NOV													
02...	<.041	.30	.37	2.12	.012	2.5	.040	.028	.058	20	4.7	5	1.5
DEC													
05...	<.041	.61	.37	2.55	.011	2.9	.155	.140	.171	20	4.0	2	.81
JAN													
03...	.058	.33	.39	2.77	.013	3.2	.157	.133	.171	M	4.6	4	1.7
FEB													
06...	E.032	.38	1.3	2.94	.019	4.2	.154	.148	.400	M	9.0	161	287
MAR													
06...	<.041	.37	.60	4.69	.018	5.3	.133	.118	.205	M	7.7	38	47
APR													
02...	<.041	.29	.50	1.85	.010	2.3	.089	.079	.160	30	7.9	34	63
MAY													
02...	<.041	.45	1.9	1.59	.035	3.5	.129	.095	.614	10	4.3	348	2020
JUN													
04...	<.040	.33	.63	.767	.009	1.4	.075	.055	.135	40	16.3	12	5.8
JUL													
10...	<.040	.38	1.2	<.050	<.006	--	.048	.024	.191	M	7.9	46	8.6
AUG													
06...	E.038	.45	.69	.201	.014	.89	.060	.035	.122	M	6.0	20	1.6
SEP													
04...	E.026	E.37	.71	E.478	E.014	--	E.049	E.027	.103	M	5.2	21	1.8